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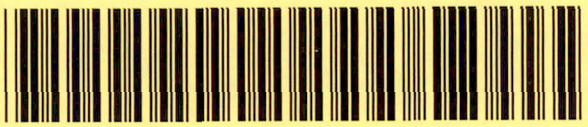

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Site Name TOWN OF MOCKSVILLE MAINTENANCE SHOP

DocumentType Site Assessment Plan (SAP)

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Box SF3438

AccessLevel PUBLIC

Division WASTE MANAGEMENT

Section SUPERFUND

Program IHS (IHS)

DocCat FACILITY

S&ME

January 25, 2008

NCDENR-DWQ
585 Waughtown Street
Winston-Salem, NC 27107

Attention: Mr. Collin Day

Reference: **Work Plan for Additional Site Assessment Activities**
Town of Mocksville Maintenance Shop
337 Sanford Avenue
Mocksville, North Carolina
S&ME Project No. 1584-07-070

Dear Mr. Day:

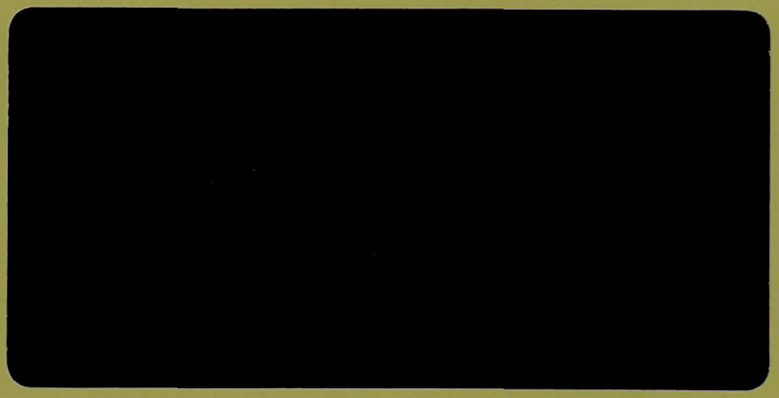
S&ME, Inc. has completed a Work Plan for Additional Site Assessment Activities (Work Plan) for the referenced property. On behalf of the Town of Mocksville, S&ME, Inc. (S&ME) is providing this Work Plan to perform additional assessment activities at the Town of Mocksville Maintenance Shop in Mocksville, North Carolina (see **Figures 1** and **2**). Please review the Work Plan and provide S&ME with your approval of this plan.

Sincerely,

S&ME, Inc.

Lisa Ennis
Environmental Scientist

Edmund Q.B. Henriques, P.G.
Environmental Department Manager



S&ME

WORK PLAN FOR ADDITIONAL SITE ASSESSMENT ACTIVITIES
TOWN OF MOCKSVILLE MAINTENANCE SHOP
MOCKSVILLE, NORTH CAROLINA

S&ME Project No. 1584-07-070

Prepared for:
Town of Mocksville
171 Clement Street
Mocksville, North Carolina 27028

Prepared By:
S&ME, Inc.
3718 Old Battleground Road
Greensboro, North Carolina 27410

January 25, 2008

S&ME

January 25, 2008

Town of Mocksville
171 Clement Street
Mocksville, North Carolina 27028

Attention: Ms. Christine Sanders
Town Manager

Reference: **Work Plan for Additional Site Assessment Activities**
Town of Mocksville Maintenance Shop
337 Sanford Avenue
Mocksville, North Carolina
S&ME Project No. 1584-07-070

Dear Ms. Sanders:

On behalf of the Town of Mocksville, S&ME, Inc. (S&ME) is providing this Work Plan to perform additional assessment activities at the Town of Mocksville Maintenance Shop in Mocksville, North Carolina (see **Figures 1** and **2**).

Sincerely,

S&ME, Inc.

Lisa Ennis
Environmental Scientist

NORTH CAROLINA LICENSED SEAL 1216 GEOLOGIST EDMUND Q.B. HENRIQUES

Edmund Q.B. Henriques, P.G.
Environmental Department Manager

TABLE OF CONTENTS

1. BACKGROUND INFORMATION

The subject site is currently operated as a maintenance facility for the Town of Mocksville. The subject site is located near the intersection of Sanford Avenue and Locust Street in Mocksville, North Carolina and is addressed as 337 Sanford Avenue. **Figure 1** contains a USGS Topographic Map indicating the approximate location of the subject site.

The maintenance facility is comprised of two parcels. According to the Davie County, NC – GIS/Mapping System (**http://maps.co.davie.nc.us/gomaps/map/Index.cfm**), the parcels can be identified as Parcel Identified Numbers (PIDs) 5738633668 and 5738634677 and are 1.035 acres and 1.026 acres, respectively.

On November 16, 2007, containers with listed hazardous materials were discovered to have been buried on the subject property. At the direction of the Town of Mocksville, on November 17, 2007, Grey Engineering, Inc. observed the excavation of the discarded containers and suspected impacted soil. Reportedly, two separate excavations were completed, each approximately 10 foot by 10 foot and 6 foot deep. The discarded containers and soil surrounding the containes were placed into roll-off box containers. Two roll-off box containers were partially filled. The contents of each roll-off box is reported to represent a separate excavation. The roll-off box containers with the excavated materials are currently stored at the Davie County solid waste transfer station, pending off-site disposal.

S&ME was contacted by the Town of Mocksville on November 19, 2007, and was asked to assist with the management, assessment, and closure of this incident. Based on our review of MSDS sheets provided to S&ME by the Town of Mocksville, the known or suspected wastes found at the site include: Sewercide, floating lift station degreaser, and discarded paint cans. According to the information available on the MSDSs, the hazardous materials in Sewercide include sodium hydroxide (CAS 1310-73-2), aluminum metal (CAS 7429-90-5), and sodium nitrate (CAS 7631-99-4). The hazardous materials in the degreaser include monocyclic terpenes (CAS 5989-27-5) and petroleum naphtha (CAS 64742-88-7).

S&ME, on behalf of the Town of Mocksville, submitted a *Notification of an Inactive Hazardous Substance or Waste Disposal Site* to the Inactive Hazardous Sites Branch (IHSB) of the North Carolina Department of Environment and Natural Resources (NCDENR). This notification was submitted to NCDENR on November 26, 2007.

On December 7, 2007, S&ME collected soil samples from each of the two roll-off boxes stored at the Davie County solid waste transfer station. The samples were collected and analyzed to characterize the excavated waste for disposal. Table 1 and Table 2 provides a summary of the waste characterization analytical results. On December 7, 2007, Collin Day of the NCDENR-Division of Water Quality collected a split sample from the S&ME sample collected from roll-off bin A. The analytical results for the split sample were similar to that of the sample submitted by S&ME.

To initiate an assessment of potential residual contamination associated with each of the two disposal areas, the following plan is proposed.

2. STRATEGY FOR ADDITIONAL SAMPLING

Based on the results from the December 7, 2007 sampling of excavated soil and waste on site, a strategy for additional sampling is proposed herein. The results indicated the presence of several volatile and semi-volatile organic compounds in the excavated materials, at concentrations that were less than the corresponding NCDENR Soil Remedial Goals (SRGs). However, there were no confirmation soil samples collected at the time of removal of the soil and waste performed on November 17, 2007. Therefore this work plan has been developed to assess the remaining soils in the two areas of concern, and to assess groundwater if encountered prior to auger refusal. Site assessment, sample collection, documentation, handling, preservation and shipping procedures will be performed in general accordance with the NCDENR IHSB, *Guidelines for Assessment and Cleanup*, August 2007.

3. SOIL SAMPLING

Soil sampling in each of the two areas of concern will be performed to evaluate potential residual levels of contaminants of concern that may be present in the soil following the November 2007 initial abatement removal actions. A Town representative present during the initial excavation and the excavator operator responsible for initial removal of the waste will meet with S&ME on site to visually indicate the location of each of the two excavations

S&ME will utilize Geoprobe technology to push one boring at each of the two areas of concern. At each location continuous core samples will be collected from the ground surface using hollow acetate sleeves, until probe refusal or groundwater is encountered. Samples from each acetate sleeve will be placed into a sealed, Ziploc® bag and field screened for organic vapors using a toxic vapor analyzer (TVA). Soil samples will be collected for laboratory analysis, every 5 feet beginning at 3 feet below ground surface. However, if there is soil that exhibits visual impact or has high screening levels, the soil from that sample depth will be collected for the corresponding 5 foot interval. The lithology of each soil sample will be recorded. Approximate proposed soil sample locations are shown on Figure 2.

The soil samples will be placed in laboratory supplied containers, put on ice, and placed in a cooler to be sent to a North Carolina certified laboratory. The soil samples will be analyzed for VOCs by EPA Method 8260, SVOCs by EPA Method 8270, and for the 8 RCRA Metals. Field blank, trip blank, and duplicate samples will be collected to provide the necessary quality control.

Soil generated during completion of the bore holes will be placed in labeled and sealed drums for possible off-site disposal until laboratory data is available to determine how to treat or dispose of the material.

4. GROUNDWATER SAMPLING

At the same locations of the two soil borings described above, once the groundwater table is encountered, the probe will be advance approximately five feet beneath the groundwater table. From these points, a groundwater sample will be collected with an in-situ groundwater sampling tool and using clean tubing and a peristaltic or inetia pump. However, if the Geoprobe encounters refusal before reaching the groundwater table in either boring a temporary monitoring well will be installed using hollow stem augers. The wells will be installed for the collection of one groundwater sample located above consolidated (i.e. rock) at the site. No drilling within rock will be performed. The approximate proposed monitoring well locations are depicted on Figure 2.

If warranted due to Geoprobe refusal, the shallow temporary monitoring wells will consist of 2-inch diameter schedule 40, flush-thread, PVC pipe. The lower portion of the pipe will consist of manufactured well screen with 0.010-inch slots. The length of the well screen pipe will be determined based on the depth of the apparent water table. (Note: The well screen length and depth will be situated so top of the water table intersects the well at the well screen.) Medium-to-fine grained, washed sand will be placed in the annular space of the well to a level approximately 1 foot above the top of the well screen, with a 2-foot thick bentonite seal positioned on top of the sand pack.

The monitoring wells will be developed using either bailer and string or a peristaltic pump with clean tubing depending on the depth to groundwater. The purge water will be monitored for temperature, pH, conductivity, and dissolved oxygen. The well has been sufficiently purged when the temperature, pH, conductivity, and dissolved oxygen of the ground water have stabilized. In general, stabilization occurs when pH, conductivity, and turbidity varies no more than 10% and the temperature is constant for three consecutive readings. The stabilized field parameters will be recorded. Once the well has been sufficiently purged, a groundwater sample will be collected and placed into laboratory prepared containers.

The collected groundwater sample will be analyzed for VOCs by EPA Method 8260, SVOCs by EPA Method 8270, and RCRA 8 Metals. Field blank, trip blank, and duplicate samples will be collected and analyzed to provide the quality control.

The development and purge water will be placed in labeled and sealed drums for possible disposal off-site until laboratory data is available to determine how to treat or dispose of the material.

5. REPORTING

Upon completion of the sampling activities, S&ME will prepare a report summarizing our activities. The report will include a discussion of sampling activities performed at each site, a discussion of quality assurance procedures and results, a comparison of detected concentrations to SRG concentrations, and recommendations.

6. ASSUMPTIONS

The proposed monitoring well and soil sample indicated on Figure 2 are approximate. These locations may need to be modified based on the presence of utilities and/or access issues.

7. CLOSURE

This Work Plan was prepared for the Town of Mocksville. S&ME appreciates the opportunity to assist you with this project. If you have any questions regarding this report, please call at your convenience.

Sincerely,

S&ME, INC.

Lisa Ennis
Environmental Scientist

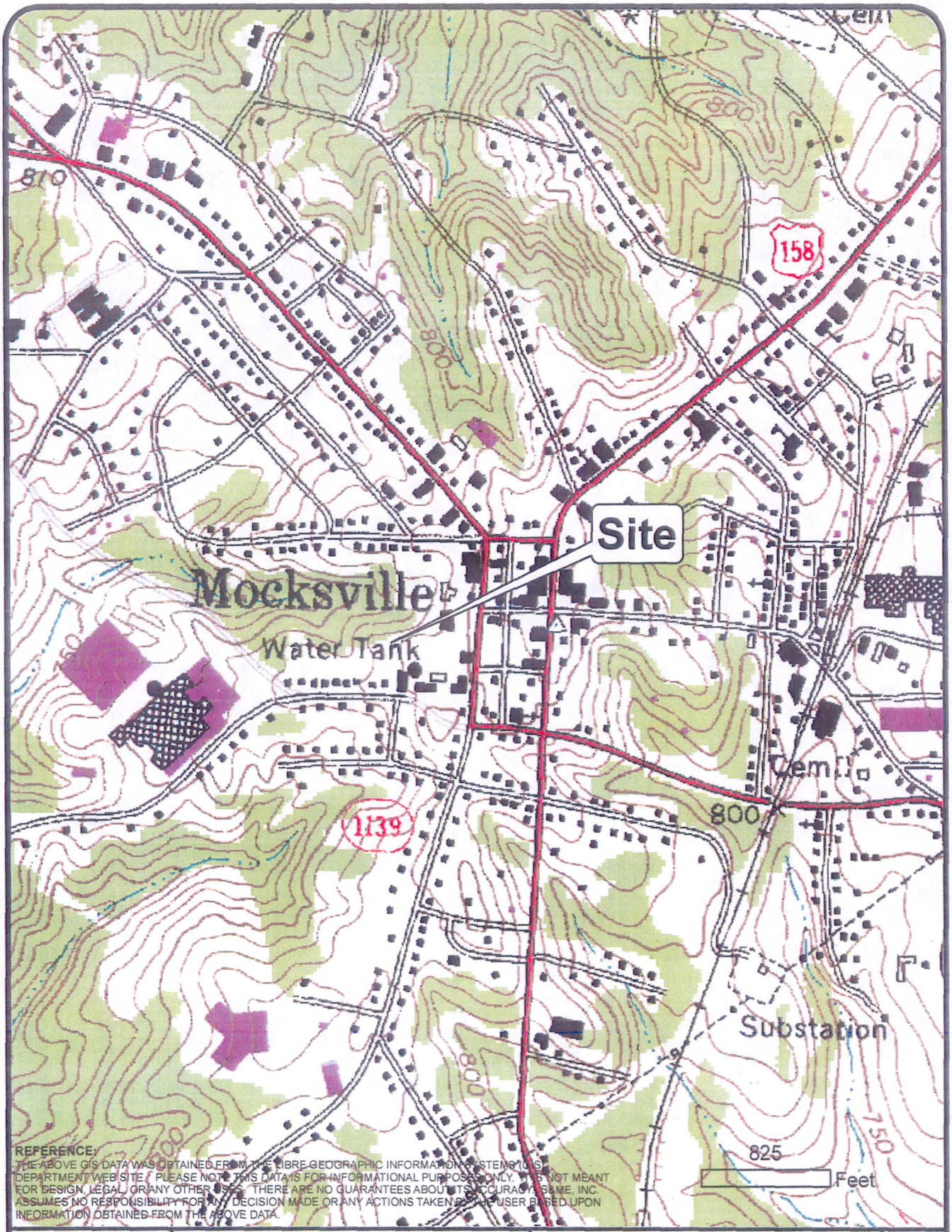
Edmund Q.B. Henriques, P.G.
Environmental Department Manager

Attachment(s):Figure 1 – Site Vicinity
Figure 2 – Proposed Sample Locations

APPENDIX

APPENDIX I

Figures



REFERENCE:
THE ABOVE GIS DATA WAS OBTAINED FROM THE LIBRE GEOGRAPHIC INFORMATION SYSTEMS (GIS) DEPARTMENT WEB SITE. PLEASE NOTE, THIS DATA IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR ANY OTHER USES. THERE ARE NO GUARANTEES ABOUT ITS ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON INFORMATION OBTAINED FROM THE ABOVE DATA.

SCALE:	As Shown
DATE:	1-23-08
DRAWN BY:	LSE
PROJECT NO:	1584-07-070

S&ME
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Site Vicinity Map

Town of Mocksville
North Carolina

FIGURE NO. 1

REFERENCE:
THE ABOVE GIS DATA WAS OBTAINED FROM DAVIE COUNTY GEOGRAPHIC INFORMATION SYSTEMS (GIS) DEPARTMENT WEBSITE. PLEASE NOTE: THIS DATA IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR ANY OTHER USES. THERE ARE NO GUARANTEES ABOUT ITS ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISIONS MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THE INFORMATION OBTAINED FROM THE ABOVE DATA.

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DATE:	1-23-08
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Proposed Soil Boring/ Monitor Well Locations

Town of Mocksville
North Carolina

FIGURE NO. 2